

Memorandum

Date: February 11, 2003

Telephone: (916) 654-4067

File: 01-AFC-22

To: Commissioner Arthur Rosenfeld, Presiding Member
Commissioner John Geesman, Associate Member
Major Williams, Hearing Officer

From: California Energy Commission
1516 Ninth Street
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Matt Trask
Siting Project Manager

Subject: **STAFF'S RESPONSE TO APPLICANT'S PROPOSED CHANGES TO
CONDITIONS OF CERTIFICATION FOR THE SAN JOAQUIN VALLEY ENERGY
CENTER (01-AFC-22)**

Attached is staff's response to the Applicant's proposed changes to staff's recommended Conditions of Certification for the San Joaquin Valley Energy Center. The Applicant requested that staff consider these proposed changes in written testimony submitted to the Energy Commission on January 27, 2003, for all areas except noise and air quality, and on February 4, 2003, for noise and air quality. This document addresses the Applicant's proposed changes in all areas except visual resources, which will be addresses in a separate filing.

In the attached response, staff has indicated whether it can or cannot agree to the proposed changes, and in some cases either requests additional information, makes a counter-proposal, or, in one case, recommends a new condition of compliance (condition of compliance **PUBLIC HEALTH-1**). In addition, staff has also included in this document a revised version of the Paleontology-related conditions of compliance containing minor, non-substantive edits that further clarify the conditions.

It is staff's desire to work out as many issues as possible prior to hearings in the case, so that staff and the applicant can stipulate to their agreement on the proposed conditions of compliance in almost all areas.

Thank you for your consideration of staff's response to the Applicant's requested changes.

cc: Docket (01-AFC-22)
Proof of Service List

Attachment

STAFF'S RESPONSE TO APPLICANT'S PROPOSED CHANGES TO SAN JOAQUIN VALLEY ENERGY CENTER CONDITIONS OF COMPLIANCE

Below are the responses by California Energy Commission staff to the Applicant's proposed changes to the Conditions of Certification as specified in the July 16, 2002, Staff Assessment, and the December 24, 2002, Addendum to the Staff Assessment for the San Joaquin Valley Energy Center (SJVEC) proceeding (01-AFC-22). The Applicant proposed these changes in written testimony filed on January 27 and February 4, 2003. The responses are broken down by technical area, and then by each specific Condition of Certification within that technical area. In instances where staff agrees that changes are appropriate, new text is underlined and deleted text is struck-through. In some cases, Staff has proposed minor changes to certain Conditions of Certification based on new information received since publishing the Addendum to the Staff Assessment.

AIR QUALITY

AQ-C1

Staff agrees with applicant's proposed changes. Staff's proposed Condition of Certification AQ-C1 is hereby revised to read:

AQ-C1. The project owner shall fund all expenses for an on-site air quality construction mitigation manager(s) (AQCMM) who shall be responsible for maintaining compliance with conditions AQ-C2 through AQ-C5 for the entire project site and linear facility construction. The on-site AQCMM shall have full access to areas of construction of the project site and linear facilities, and shall have the authority to appeal to the CPM to have the CPM stop any or all construction activities as warranted by applicable construction mitigation conditions. The on-site AQCMM shall have a current certification by the California Air Resources Board for Visible Emission Evaluation prior to the commencement of ground disturbance. The AQCMM need not be one individual and may have other responsibilities in addition to those described in this condition. The on-site AQCMM shall not be terminated without written consent of CPM.

At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM, for approval, the name, current ARB Visible Emission Evaluation certificate, and contact information for the on-site AQCMM.

AQ-C3

Staff disagrees with the applicant's proposed changes to this condition.

This condition lays the foundation for the construction mitigation requirements and lists them in a manner that can be easily interpreted by CEC compliance personnel and the AQCMM(s). Staff believes that aggressive dust control measures are warranted for this project due to the site-specific factors mentioned in the response below for AQ-C5.

Additionally, in order to address one specific concern from the Applicant, staff is requiring soot filters (in addition to ultra low sulfur diesel and 1996 ARB or EPA certified standards for diesel off-road equipment over 100 hp) under the recommendation given in the Public Health section of the Staff Assessment¹. This additional mitigation is necessary to reduce the otherwise potentially significant cancer risk (>10 in one million cancer risk) from diesel particulate emissions.

AQ-C4

Staff agrees with applicant's proposed changes. Staff's proposed Condition of Certification AQ-C1 is hereby revised to read:

AQ-C4 No construction activities are allowed to cause visible emissions at or beyond the project site fenced property boundary. No construction activities are allowed to cause visible plumes that exceed 20 percent opacity at any location on the construction site. No construction activities are allowed to cause any visible plume in excess of 200 feet beyond the centerline of the construction of linear facilities, or cause visible plumes to occur within 100 feet upwind of any occupied structures located outside the construction area.

The on-site AQCMM shall conduct a visible emission evaluation at the construction site fence line, or 200 feet from the center of construction activities at the linear facility, or adjacent to occupied structures outside the construction area, each time he/she sees excessive fugitive dust from the construction or linear facility site. The records of the visible emission evaluations shall be maintained at the construction site and shall be provided to the CPM on the monthly construction report.

AQ-C5

Staff disagrees with the deletion of this condition. The CEC does not have the resources to be onsite on a regular basis to enforce construction emission mitigation conditions. This condition is necessary to provide a demonstration of compliance with conditions AQ-3 and AQ-111 through AQ-117.

The Applicant notes that the CEC has not required the same level of construction mitigation for all projects². That is so because the level of construction mitigation for each project is determined on a case-by-case basis after a thorough review of a

¹ CEC Staff Assessment Page 4.7-13

² Applicant Group 2 Testimony Pages 15 and 16

number of project and site specific factors. In this particular case some of the factors that were considered are as follows:

- The local PM₁₀ ambient air quality conditions, which violate the federal and state annual AAQS and regularly violate the state 24-hour AAQS.
- The peak PM₁₀ concentrations predominately occur in the fall and winter. During winter there is a high frequency of winds to the northwest (i.e. from the site towards the City of San Joaquin) and the wind speeds in this direction are generally low, which reduces dispersion potential.
- The City of San Joaquin is located within a mile of the site.
- Fresno County has one of the highest rates of diagnosed asthma cases in the State of California.
- Potentially significant cancer risks were found due to diesel particulate.

Staff considered these factors, as well as other pertinent data, in determining appropriate construction emissions mitigation for this project.

AQ-C6

Staff proposes the following changes to the Applicant's proposed changes for this condition:

AQ-C6 The project owner shall submit to the CPM for review and approval any substantive modification proposed by the project owner to any project air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or EPA, and any revised permit issued by the District or EPA, for the project.

The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by the 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM ~~correspondence regarding modifications proposed by the District or EPA to any air quality permit and all modified air permits to the CPM~~ within 15 days of receipt.

The CEC may not be copied on relevant correspondence from an agency to the project owner, so we will need the project owner to provide the CEC with copies of these relevant documents. The CEC needs to be informed of pending permit revisions that may result from new rules, etc. Staff does not consider this to be a burdensome condition.

Staff also believes that all requested substantive permit changes by the project owner, whether they are changes to the conditions or otherwise, should be forwarded to the CEC so that the CEC can remain informed regarding all substantive project changes.

AQ-C7

Staff disagrees with the Applicant's recommendation to delete this condition. Staff recommends that this condition remain, and be finalized upon receipt of a complete and legally valid offset mitigation proposal.

The Applicant argues that this condition "would require preparation and submission of an entirely new ERC package for SJVEC"³, and further ties their opposition to their issues with staff's findings regarding the current offset package. However, staff's stated purpose of this condition is to "require the Applicant to maintain specific approved emission reduction credits committed to the SJVEC project and require the Applicant to obtain approval to amend the list of project committed offset credits."⁴ The issues surrounding the validity of the proposed ERCs are another matter completely.

Staff believes that modifications to the project's emissions offset mitigation proposal need to be identified and approved during the compliance phase of the project; a project owner cannot substitute ERCs at will. The mitigation package as originally proposed and approved has undergone formal CEQA review, public participation, and approval. Changes to this approved mitigation plan need to be reviewed and approved just as we would review and approve proposed project design changes or proposed changes to air quality control equipment, emission limits, or other forms of project mitigation.

The Warren-Alquist Act, at Public Resources Code Subsection 25523(d)(2), provides:

"The commission may not find that the proposed facility conforms with applicable air quality standards pursuant to paragraph (1) unless the applicable air pollution control district or air quality management district certifies, prior to the licensing of the project by the commission, that complete emissions offsets for the proposed facility have been identified and will be obtained by the applicant within the time required by the district's rules or unless the applicable air pollution control district or air quality management district certifies that the applicant requires emissions offsets to be obtained prior to the commencement of operation consistent with Section 42314.3 of the Health and Safety Code and prior to commencement of the operation of the proposed facility. The commission shall require as a condition of certification that the applicant obtain any required emission offsets within the time required by the applicable district rules, consistent with any applicable federal and state laws and regulations, and prior to the commencement of the operation of the proposed facility." [emphasis added]

³ Applicant Group 2 Testimony Page 30.

⁴ CEC Staff Assessment Addendum page 4.1-66

Staff interprets the statute to require the identification of specific offsets prior to certification and that those same offsets be surrendered at the time required by the District rules. There is no allowance for the substitution of other credits without the approval of the Commission.

That the applicant appears to believe that it can modify the Pastoria Energy Facility's offset package without notice or review illustrates the need for this condition. It is staff's intention that a condition of this type become a standard air quality condition. Regarding the Pastoria Energy Facility, staff believes that an amendment to the Commission Decision is necessary in order to modify its offset package. If the removal of a credit from the Pastoria inventory is approved, it is then free for use with this or another facility. As part of its review of such a request, the Commission would ascertain whether the credits remaining in the Pastoria inventory are sufficient to offset that project's emissions.

CULTURAL RESOURCES

CUL-6

Staff does not agree with the applicant's proposed changes to this condition.

In the past staff has found that the ability to communicate directly with the CRS has helped minimize delays in project work and makes the conditions more effective and efficient. This has been used in many projects without objection.

CUL-7

Staff does not agree with applicant's proposed changes.

This condition is needed to ensure there is no impact to the resources. Having this condition in place would encourage the applicant to include similar conditions in the construction contracts. If the engineering of the plant changes as the design proceeds, and the area could not be returned to the same contour and appearance, then the condition would need to be fulfilled. If, as the applicant states, they will return the area to the same contour and appearance, then there is no requirement for them to fulfill.

The presence of this condition is like other mitigation measures that the applicant has stated they would institute. The Energy Commission conditions the permit to ensure that the mitigation measures are carried out. Without the conditions, there is no way to conclude in the staff assessment that the conditions would ensure a mitigation to less than significant levels.

FACILITY DESIGN

GEN-2

The Applicant has proposed revising the major structures and equipment table that accompanies this condition, asserting that the list should be revised to focus the Chief Building Official's review on life safety items. Staff disagrees that the table should be revised. The Applicant makes reference to a "black box" approach for determining compliance in Facility Design. This approach was once used by Energy Commission staff for projects processed more than two years ago during the power emergency, under the Commission's emergency 4-month and 21-day siting processes. This approach was adopted as a means of assuring the rapid construction of emergency peaker power plants to meet electric power demands. The approach involved risk that the projects would not, in fact, be built in compliance with codes, but it was deemed necessary at the time in order to help prevent rolling blackouts.

Now that the power emergency has passed, staff expects that power plants will be built in accordance with applicable codes. This condition does not require the project owner to do anything beyond what is already required by law, i.e., the code. The condition only establishes a mechanism that allows staff to easily monitor compliance with the code.

GEOLOGY, MINERAL RESOURCES AND PALEONTOLOGY

PAL-1

Though the Applicant proposed no changes to this Condition, Staff proposes the following changes based upon recent revisions to the model condition made to clarify the information or actions required. Staff's proposed Condition of Certification PAL-1 is hereby revised to read:

PAL-1 The project owner shall provide the CPM with the resume and qualifications of its Paleontological Resource Specialist (PRS) for review and approval. If the approved PRS is replaced prior to completion of project mitigation and submittal of the Paleontological Resources Report, the project owner shall obtain CPM approval of the replacement PRS. The project owner shall submit to the CPM to keep on file, resumes of the qualified Paleontological Resource Monitors (PRMs). If ~~the a~~ PRMs is/are replaced, the resume of the replacement PRM shall also be provided to the CPM.

The PRS's resume shall include the names and phone numbers of the ~~contacts~~references provided for checking employment or qualifications. The

resume shall also demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the required paleontological resource tasks.

As determined by the CPM, the PRS shall meet the minimum qualifications for a vertebrate paleontologist as described in the Society of Vertebrate Paleontologists (SVP) guidelines of 1995. Demonstration of the experience of the PRS shall include the following:

- 1) institutional affiliations or appropriate credentials and college degree;
- 2) ability to recognize and collect fossils in the field;
- 3) local geological and biostratigraphic expertise;
- 4) proficiency in identifying vertebrate and invertebrate fossils and;
- 5) at least three years of paleontological resource mitigation and field experience in California, and at least one year of experience leading paleontological resource mitigation and field activities.

The project owner shall ensure that the PRS obtains qualified paleontological resource monitors to monitor as he or she deems necessary on the project. Paleontologic resource monitors shall have the equivalent of the following qualifications:

- 1) BS or BA degree in geology or paleontology and one year experience monitoring in California; or
- 2) AS or AA in geology, paleontology or biology and four years experience monitoring in California; or
- 3) Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.

Verification: (1) At least 60 days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work. (2) At least 20 days prior to ground disturbance, the PRS or project owner shall provide a letter with resumes naming anticipated monitors for the project and stating that the identified monitors meet the minimum qualifications for paleontological resource monitoring required by the condition. If additional monitors are obtained during the project, the PRS shall provide additional letters and resumes to the CPM attesting to the monitor's qualifications. The letter shall be provided to the CPM no later than one week prior to the monitor beginning on-site duties. (3) Prior to the termination or release of a PRS, the project owner shall submit the resume of the proposed new PRS to the CPM for review and approval.

PAL-2

Though the Applicant proposed no changes to this Condition, Staff proposes the following changes based upon recent revisions to the model condition made to clarify the information or actions required. Staff's proposed Condition of Certification PAL-2 is hereby revised to read:

PAL-2 The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant and all ~~linear~~ related facilities. Maps shall identify all areas of the project where ground disturbance is anticipated. If the PRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan, and the plan and profile drawings for the utility lines would normally be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances, and can be on a scale ranging between 1 inch = 40 feet to 1 inch = 100 feet. If the footprint of the power plant or linear facility changes, the project owner shall provide maps and drawings reflecting these changes to the PRS and CPM.

If construction of the project will proceed in phases, maps and drawings may be submitted prior to the start of each phase. A letter identifying the proposed schedule of each project phase shall be provided to the PRS and CPM. Prior to work commencing on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes.

At a minimum, the project owner shall ensure that the PRS or PRM consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

(1) At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings to the PRS and CPM. (2) If there are changes to the footprint of the project, revised maps and drawings shall be provided to the PRS and CPM at least 15 days prior to the start of ground disturbance. (3) If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within 5 days of identifying the changes.

PAL-3

Staff agrees with the Applicant's proposed changes to this condition, and makes further minor edits to clarify the requirements. Staff's proposed Condition of Certification PAL-3 is hereby revised to read:

PAL-3 The ~~project owner shall ensure that the~~ PRS ~~shall prepare~~s, and ~~the project owner shall submit~~s to the CPM for review and approval, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting and sampling activities and may be modified with CPM approval. This document shall be used as a basis for discussion in the event that on-site decisions or changes are proposed. Copies of the PRMMP shall reside with the PRS, each monitor, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the Society of the Vertebrate Paleontologists (SVP, 1995) and shall include, but not be limited to, the following:

- 1) Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation will be performed according to the PRMMP procedures;
- 2) Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and ~~all the~~ conditions offer certification;
- 3) A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units;
- ~~4) An explanation of why, how, and how much sampling is expected to take place and in what units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained beds;~~
- ~~5) 4) A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed schedule for the monitoring~~ and sampling;
- ~~6) 5) A discussion of the procedures to be followed in the event of a significant fossil discovery, including notifications~~ will be performed;

~~7)6)~~ A discussion of equipment and supplies necessary for recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;

~~8)7)~~ Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meets the Society of Vertebrate Paleontologists standards and requirements for the curation of paleontological resources; and

~~9)8)~~ Identification of the institution that has agreed to receive any data and fossil materials recovered, requirements or specifications for materials delivered for curation and how they will be met, and the name and phone number of the contact person at the institution; and,

~~10)9)~~ A copy of the paleontological conditions of certification.

Verification: At least 30 days prior to ground disturbance, the project owner shall submit the PRMMP to the CPM. The PRMMP shall include an affidavit of authorship by the PRS, and acceptance of the project owner evidenced by a signature.

PAL-4

Though the Applicant proposed no changes to this Condition, Staff proposes the following changes based upon recent revisions to the model condition made to clarify the information or actions required. Staff's proposed Condition of Certification PAL-4 is hereby revised to read:

PAL-4 Prior to ground disturbance and for the duration of construction, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for all project managers, construction supervisors and workers who are involved with or operate ground disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of an initial in-person PRS training during the project kick-off for those mentioned above. Following initial training, a CPM-approved video or in-person training may be used for new employees. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

The Worker Environmental Awareness Program (WEAP) shall address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. ~~For locations of high sensitivity, g~~Good quality photographs or physical examples of vertebrate fossils ~~that may be expected in the area~~shall be provided for project sites containing units of high paleontologic sensitivity;
3. Information that the PRS or PRM has the authority to halt or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;
4. Instruction that employees are to halt or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM;
5. An informational brochure that identifies reporting procedures in the event of a discovery;
6. A Certification of Completion of WEAP form signed by each worker indicating that they have received the training; and
7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: (1) At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP including the brochure with the set of reporting procedures the workers are to follow. (2) At least 30 days prior to ground disturbance, the project owner shall submit the script and final video to the CPM for approval if the project owner is planning on using a video for interim training. (3) If an alternate paleontological trainer is requested by the owner, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval prior to installation of an alternate trainer. Alternate trainers shall not conduct training prior to CPM authorization. (4) ~~The project owner shall provide i~~n the Monthly Compliance Report the project owner shall provide the WEAP copies of the Certification of Completion forms with the names of those trained and the trainer or type of training offered that month. The Monthly Compliance Report shall also include a running total of all persons who have completed the training to date.

PAL-5

The Applicant objected though did not propose changes to language specifying that the Paleontological Resource Specialist (PRS) may informally communicate with the Energy Commission's Compliance Project Manager at any time, saying it is inappropriate for a consultant to be communicating directly with the regulatory

agency rather than through the project owner. In the past staff has found that the ability to communicate directly with the PRS has helped minimize delays in project work and makes the conditions more effective and efficient. This has been used in many projects without objection. The Applicant also commented that there needs to be some provision if construction is stopped over the weekend and the CPM is not available. Typically, the CEC provides a number to contact on the CPM's voicemail allowing the caller to contact an alternate person. Staff agrees to the Applicant's proposed changes to the condition. Staff's proposed Condition of Certification PAL-5 is hereby revised to read:

PAL-5 The project owner shall ensure that the PRS and PRM(s) monitor, consistent with the PRMMP, all construction-related grading, excavation, trenching, and augering in areas where potentially fossil-bearing materials have been identified. In the event that the PRS determines full time monitoring is not necessary in locations that were identified as potentially fossil-bearing in the PRMMP, the project owner shall notify and seek the concurrence of the CPM.

The project owner shall ensure that the PRS and PRM(s) have the authority to halt or redirect construction if paleontological resources are encountered. The project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows:

1. Any change of monitoring different from the accepted plan presented in the PRMMP shall be proposed in a letter or email from the PRS and the project owner to the CPM prior to the change in monitoring. The letter or email shall include the justification for the change in monitoring and submitted to the CPM for review and approval.
2. The project owner shall ensure that the PRM(s) keep a daily log of monitoring of paleontological resource activities. The PRS may informally discuss paleontological resource monitoring and mitigation activities with the CPM at any time.
3. The project owner shall ensure that the PRS ~~immediately~~ notifies the project owner and the CPM within 24 hours of the occurrence of any incidents of non-compliance with any paleontological resources conditions of certification. The PRS shall recommend corrective action to resolve the issues or achieve compliance with the Conditions of Certification.
4. ~~For any significant paleontological resource encountered, either the project owner or the PRS shall notify the CPM immediately~~within 24-hours of a significant find (no later than the following morning after the find, or Monday morning in the case of a weekend) when there has been a significant find or a~~of any~~halt of construction activities due to the discovery of fossil materials.

The project owner shall ensure that the PRS prepares a summary of the monitoring and other paleontological activities that will be placed in the Monthly Compliance Report. The summary will include the name(s) of PRS or ~~PRM~~ PRM monitor(s) active during the month, general descriptions of monitored construction activities and general locations of excavations, grading, etc. A section of the report will include the geologic units or subunits encountered; descriptions of sampling within each unit; and a list of identified fossils ~~identified in the field~~. A final section of the report will address any issues or concerns about the project relating to paleontologic monitoring including any incidents of non-compliance and any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the project owner shall include an explanation in the summary as to why monitoring was not conducted.

The project owner shall ensure that the PRS submits the summary of monitoring and paleontological activities in the Monthly Compliance Report.

PAL-6

Staff agrees with the Applicant's proposed changes to this condition. Staff's proposed Condition of Certification PAL-6 is hereby revised to read:

PAL-6 The project owner shall ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS. The PRR shall be prepared following completion of the ground disturbing activities. The PRR shall include an analysis of the collected fossil materials and related information and submitted to the CPM for review and approval.

The report shall include, but is not be limited to, a description and inventory of collected fossil materials; a map showing the location of paleontological resources encountered; determinations of sensitivity and significance; and a statement by the PRS that project impacts to paleontological resources have been mitigated below the level of significance.

Verification: Within 90 days after completion of ground disturbing activities, including landscaping, the project owner shall submit the Paleontological Resources Report under confidential cover to the CPM.

PAL-7

Though the Applicant proposed no changes to this Condition, Staff proposes the following changes based upon recent revisions to the model condition made to clarify the information or actions required. Staff's proposed Condition of Certification PAL-7 is hereby revised to read:

PAL-7 The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed including the collection of fossil materials, recovery, preparation of fossil materials for analysis, analysis of fossils, fossil identification and inventory, the preparation of fossils for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during the project construction monitoring, data recovery, mapping, and mitigation activities related to the project.

Verification: The project owner shall maintain in their compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved PRR. The project owner shall be responsible to pay any curation fees charged by the museum for fossils collected and curated as a result of paleontological monitoring and mitigation. A copy of the transmittal submitting the fossils to the curating institution shall be provided to the CPM.

HAZARDOUS MATERIALS

HAZ-3

Staff agrees with the applicant's proposed changes to this condition. Staff's proposed Condition of Certification **HAZ-3** is hereby revised to read:

HAZ-3 If aqueous ammonia is used, the project owner shall develop and implement a Safety Management Plan for delivery of aqueous ammonia and submit the plan to the CPM for approval. If hydrogen is used, the project owner shall develop and implement a Safety Management Plan for delivery of hydrogen. The plans shall include procedures, protective equipment requirements, training and a checklist. The Safety Management Plan for hydrogen shall also include specifics about the storage and handling of hydrogen, including a plot plan describing the location of the storage, and of other flammable materials. It shall also include a section describing all measures to be implemented to prevent mixing of aqueous ammonia with incompatible hazardous materials.

Verification: At least 60 days prior to the delivery of aqueous ammonia and/or hydrogen to the facility, the project owner shall provide a safety management plan as described above to the CPM for review and approval.

HAZ-4

The Applicant has proposed that the volume of the secondary containment vessel required for the aqueous ammonia storage facility be limited to 110 percent of the storage volume in the facility, rather than the 125 percent of storage volume recommended by staff. Staff disagrees with this change. The requirement for this basin is that it hold either 125 percent of the storage volume in the facility, or 100 percent of the storage volume plus 24 hours of rainfall during a 25-year storm event. To clarify the requirement, Staff's proposed Condition of Certification **HAZ-4** is hereby revised to read:

HAZ-4 The aqueous ammonia storage facility shall be designed to either the ASME Pressure Vessel Code and ANSI K61.6 or to API 620. In either case, a secondary containment basin shall be constructed to be capable of holding either 125 percent of the storage volume or shall protect the volume of the storage tank plus the volume associated with 24 hours of rain assuming the 25-year storm as specified in the AFC.

Verification: At least 60 days prior to delivery of aqueous ammonia to the facility, the project owner shall submit final design drawings and specifications for the ammonia storage tank and secondary containment basin to the CPM for review and approval.

HAZ-6

The Applicant has proposed a minor change to the Verification section of this condition. Staff notes that the intention of the condition is that the outline of the pipeline design review plan would be prepared prior to initial fluid flow, and then 29 years later the outline would be amended to become a full plan. Staff agrees that the minor change proposed by the applicant helps to clarify this intent. The Verification section of Staff's proposed Condition of Certification **HAZ-6** is hereby revised to read:

Verification: At least 30 days prior to the initial flow of gas in the pipeline, the project owner shall provide to the CMP for review and approval an outline of the plan to accomplish a full and comprehensive pipeline design review. The full and complete plan shall be prepared amended, as appropriate, and submitted to the CPM for review and approval, not less than one year before the plan is implemented by the project owner.

HAZ-10

The Applicant has proposed a change to this condition to make it consistent with a previous change to another condition, **HAZ-3**. Staff agrees to this change. The

Applicant also requested clarification as to whether the condition's prohibition on storage of flammable or combustible materials within 50 feet of the hydrogen cylinders includes underground tanks and piping or just aboveground storage only. Staff hereby clarifies that the condition applies only to materials stored above-ground. Staff's proposed Condition of Certification **HAZ-10** is hereby revised to read:

HAZ-10 The project owner shall ensure ~~that the hydrogen gas storage cylinders are stored in an area out of the area that could be affected by a turbine overspeed event and~~ that no combustible or flammable material is stored above ground within 50 feet of the hydrogen cylinders.

Verification: At least 60 days prior to receipt of hydrogen gas on-site, the Project Owner shall provide copies of the facility design drawings showing the location of the hydrogen gas cylinders and the location of any tanks, drums, or piping containing any combustible or flammable material and the route by which such materials will be transported through the facility.

LAND USE

LAND-1

Staff agrees with Applicant's proposed changes. Staff's proposed Condition of Certification **LAND-1** is hereby revised to read:

LAND-1 The project owner shall obtain the necessary approval(s) from the City and complete any lot merger or lot line adjustments necessary to ensure that the proposed project, including associated facilities and improvements, but excluding linear facilities, will be located on a single legal lot. That single lot shall include sufficient buffer areas to protect the health and safety of current or future occupants of adjacent lots. It shall remain a single lot ~~for the life of the power plant during operation of the power plant, i.e., until such time as~~ the facility is decommissioned in accordance with local and state requirements.

Verification: At least 30 days prior to the start of construction, the Project Owner shall provide the CPM with proof of completion of the above adjustments or satisfactory evidence that no such adjustments are necessary. Prior to submitting an application to the City, the project owner shall submit the proposed lot configuration to the CPM for review and approval.

LAND-2

The Applicant proposes to add language to this condition specifying that the mitigation for the impact to prime farmland could include “land or in-lieu fees purchased for mitigation for biological effects (with the concurrence of the regulatory agencies), pursuant to the final Conditions of Certification for the project.”

Staff does not agree with this proposed change. This change could result in land acquired to mitigate for the loss of prime agricultural land being unusable in part or in whole for that purpose because of a conflict with its biological resource characteristics. It is important to ensure that the purchase of land acquired for agricultural purposes be protected as such and not confused with land acquired as mitigation for other purposes, such as biological resources. Retaining the condition as written would best ensure appropriate mitigation for the loss of prime agricultural land and make it more easily enforceable and verifiable.

NOISE

In its February 4 testimony, the Applicant described potential noise mitigation measures, and concluded that the cost of these mitigation measures would render the project infeasible. The Applicant proposed changes to the Noise Conditions of Certification to enact what it considers “feasible” mitigation. To address the Applicant’s proposed changes to the Noise Conditions of Certification, staff requires additional information from the Applicant.

CEQA and the Warren-Alquist Act require that the Commission impose feasible mitigation measures on a project as necessary to reduce its impacts to a level that is less than significant. If the application of all feasible measures does not reduce the impacts to an insignificant level, the project may still be approved if the project’s benefits are found to outweigh (override) the significant impacts. The information staff is requesting will help determine if an override is appropriate for this case.

The Application for Certification and the February 4 testimony describe a project with a certain level of noise mitigation, which staff believes is insufficient to ensure the project would not create significant adverse noise impacts on several nearby residences. The February 4 testimony included a menu of potential noise mitigation measures that might be applied to the project in order to reduce noise impacts to a level considered acceptable by staff, and estimates their cost, which totals \$55.3 million. With these two documents, the Applicant effectively showed a project with little mitigation, and one with full mitigation.

In order to evaluate the potential effectiveness of some intermediate level of mitigation, staff asks the Applicant to provide further information on possible mitigation measures, including:

1. Please repeat Table 10 from the Applicant's February 4th testimony, adding the following items:
 - low-noise electrical transformers;
 - low-noise pumps (HRSG feed pumps, condensate pumps, circulating water pumps, others as applicable); and
 - gas turbine and steam turbine enclosure vent silencers.
2. For each mitigation measure in this revised table, provide not only the estimated cost, but the projected impact on project noise, measured at the most impacted residence.

Please submit this information as soon as practicable, so that staff may have adequate time to consider it before the hearing on February 20. Questions regarding what information is requested should be addressed to Steve Baker at (916) 654-3915 or at sbaker@energy.state.ca.us.

PUBLIC HEALTH

The Applicant has not requested any changes to the Public Health section of the Staff Assessment for the SJVEC. However, since the publication of the Staff Assessment, staff has become aware of a new requirement concerning compliance with applicable Public Health-related laws, ordinances, regulations and standards related to the controlling of legionella bacteria. Therefore, the following language is added as an addendum to the Public Health section of the SJVEC Staff Assessment.

INTRODUCTION

The proposed San Joaquin Valley Energy Center (SJVEC) plans to use reclaimed water for cooling. Its proposed design would include wet cooling towers that produce associated drift (water droplets released to the atmosphere). These factors have led staff to identify an additional state regulation (below), which it believes should be included in the Laws, Ordinances, Regulations, and Standards (LORS) section of the Public Health testimony of its staff assessment.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 60306

Section 60306 states in pertinent part:

- c) Whenever a cooling system, using recycled water in conjunction with an air conditioning facility, utilizes a cooling tower or otherwise creates a mist that could come into contact with employees or members of the public, the cooling system shall comply with the following:
 - (1) A drift eliminator shall be used whenever the cooling system is in operation.
 - (2) A chlorine, or other, biocide shall be used to treat the cooling system recirculating water to minimize the growth of Legionella and other micro-organisms.

PROJECT OPERATION AND LEGIONELLA

In accordance with section 60306, the cooling tower for the facility must have a high efficiency drift eliminator designed to reduce drift to 0.0005 percent of circulating water (cooling water). In addition, the circulating water must contain conditioning chemicals, including sodium hypochlorite, which will be shock fed into the system to act as an effective biocide. Finally, a proprietary nonoxidizing biocide must be available onsite for direct feed into the circulating water system to control algae, if necessary.

Section 60306 also requires the use of biocides to minimize the growth of Legionella and other micro-organisms in cooling systems using recycled water. Legionella is a type of bacteria that grows in water (optimal temperature of 37° C) and causes Legionellosis, otherwise known as Legionnaires' disease. Untreated or inadequately treated cooling systems in the United States have been correlated with outbreaks of Legionellosis. These outbreaks are usually associated with indoor heating, ventilating, and air conditioning (HVAC) systems, but it is possible for growth to occur in industrial cooling towers and expose receptors through ambient air pathways. In response to this health concern, the California Department of Health Services (DHS) promulgated the regulation referenced above to require treatment of recycled water used in cooling water towers with biocides to minimize the growth of Legionella and other micro-organisms.

To minimize the risk from Legionella, the Cooling Technology Institute (CTI) noted that consensus recommendations include minimization of water stagnation, minimization of process leads into the cooling system that provide nutrients for bacteria, maintenance of overall system cleanliness, the application of scale and corrosion inhibitors as appropriate, the use of high-efficiency mist eliminators on cooling towers, and the overall general control of microbiological populations.

Good preventive maintenance is very important in the efficient operation of cooling towers and other evaporative equipment (ASHRAE 1998). Preventive maintenance includes having effective drift eliminators, which the project would have, periodically cleaning the system if appropriate, maintaining mechanical components in working order, and maintaining an effective water treatment program with appropriate biocide concentrations to minimize the growth of micro-organisms.

Staff notes that most water treatment programs are designed to minimize scale, corrosion, and biofouling and not to control Legionella. Thus, in order to ensure that the use of biocide at the SJVEC to treat the cooling water would also minimize the growth of Legionella bacteria and other micro-organisms, as required by section 60306, staff recommends that the applicant be required to implement a management plan that includes periodic monitoring and the maintenance and testing of the cooling water system. Staff, thus, proposes the Condition of Certification **PUBLIC HEALTH-1** below.

PROPOSED CONDITION OF CERTIFICATION

PUBLIC HEALTH-1 The project owner shall develop and implement a Cooling Water Management Plan to minimize the potential for bacterial growth in cooling water. The Plan may include weekly monitoring of biocide and chemical biofilm prevention agents, periodic maintenance of the cooling water system to remove bio-film buildup, and testing to determine the concentrations of Legionella bacteria in the cooling water.

Verification: At least 60 days prior to the commencement of cooling tower operations, the Cooling Water Management Plan shall be provided to the CPM for review and approval.

SOCIOECONOMICS

SOCIO-2

Staff agrees with the applicant's proposed changes to this condition. Staff's proposed Condition of Certification Socio-2 is hereby revised to read:

SOCIO-2 The project owner and its contractors and subcontractors shall recruit employees and procure materials and supplies within San Joaquin City first and Fresno County second, unless:

- To do so will violate federal and/or state statutes;
- The materials and/or supplies are not available;

- Qualified employees for specific jobs or positions are not available; or
- There is a reasonable basis to hire someone for a specific position from outside the local area.

Verification: At least 60 days prior to site mobilization, the project owner shall submit to the Compliance Project Manager (CPM) copies of contractor, subcontractor, and vendor solicitations and guidelines stating hiring and procurement requirements and procedures. ~~In addition, the project owner shall notify the CPM by letter of the reasons for any planned procurement of materials or hiring outside Fresno County that will occur during the two months prior to commencing construction and as necessary during construction.~~

SOIL AND WATER RESOURCES

SOIL AND WATER-3

The Applicant has proposed to eliminate this condition, saying that “SJVEC will not discharge storm water offsite during operations and the facility is, therefore, not required by the SWRCB to file a Notice of Intent or prepare a SWPPP for Industrial Activity.” Staff disagrees with the Applicant’s contention that this condition is not needed, but agrees that some changes are warranted.

The Central Valley Regional Water Quality Control Board issued a letter on July 29, 2002, to Paul Richins of the CEC stating that although no General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity would be required, the applicant is required to develop a Storm Water Pollution Prevention Plan (SWPPP) for Industrial Activity proving that the project’s storm water retention basin will be capable of containing all the stormwater and runoff from the site. At this time, staff has not received final design specifications for the SJVEC site, nor any detailed drawings and calculations for the proposed retention pond. Also, staff has no knowledge of how any non-stormwater issues will be handled, as well as overall water quality provisions for the site. Therefore, staff cannot omit Condition of Certification Soil & Water 3.

However, staff proposes the following revision to clarify that only the SWPPP for Industrial Activity needs to be prepared and approved. The Applicant does not need to file a Notice of Intent for operating under the General NPDES Permit, as was previously stated under Verification. Staff’s proposed Condition of Certification Soil & Water 3 is revised to read:

SOIL & WATER-3: Prior to initiating project operation, the project owner shall submit and obtain CPM approval of the related Storm Water Pollution

Prevention Plan (SWPPP) for Industrial Activity to the Central Valley Regional Water Quality Control Board for review and comment and to the CPM for review and approval. The SWPPP will include final operating drainage design and specify BMPs and monitoring requirements for the SJVEC project facilities. This includes final site drainage plans and locations of physical BMP's facilities/devices.

Verification: At least 60 days prior to the start of project operation, ~~the SWPPP for Industrial Activity and a copy of the Notice of Intent for operating under the General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity filed with the SWRCB, shall be submitted to the CPM~~ the project owner shall submit a copy of the SWPPP for Industrial Activities to the CPM for review and approval and to the Central Valley Regional Water Quality Control Board for review and comment. Approval of the SWPPP by the CPM must be received prior to initiation of project operation.

SOIL AND WATER-6

The applicant has proposed that this condition be deleted. However, monitoring project water use is an essential element for assuring SJVEC operates consistent with the project that was evaluated and considered by the Commission, should it be licensed and constructed. For this reason, staff cannot accept the Applicant's proposal to delete this condition. The language of this condition is also consistent with the standard conditions developed by staff for inclusion in all Staff Assessments. To the extent SJVEC water use and quality data is being collected for compliance with requirements of the Central Valley Regional Water Quality Control Board and City of Fresno, and in the event it also satisfies the conditions of the license currently under consideration, the same data may be used for all of these purposes.

SOIL AND WATER-7

The Applicant has proposed the elimination of this condition. However, the Applicant has not presented alternate sources of cooling water for emergency or backup conditions. Consequently, measuring, recording and monitoring the overall flow capacity of the reclaimed groundwater well field, including contributions from individual wells, is considered prudent for maintaining reliable SJVEC water supply and assuring the project performs as proposed.

Measurement and recording of water quality from each well is intended to verify that each well is producing percolated reclaimed water as is intended by the project, and not native groundwater. Measurement and recording of production from each well is intended to verify that performance of each well, and cumulative performance for all wells, is adequate to supply the project. Declining performance of one well will require additional production from other wells during maintenance of the well or pump. Maintenance may involve several days to weeks for pump repair or replacement, well rehabilitation, or well replacement. Measuring well production and

specific capacity of individual wells is required to insure a reliable supply of cooling water and avoid shutdown of power generation or use of other water supplies not outlined in the AFC or subsequent submittals to the CEC. No alternate or backup cooling water supplies were evaluated by staff for the SJVEC Project because neither were they proposed by the Applicant, nor were they considered necessary by staff considering the proposed project already included use of recycled water in an economic and environmentally sound manner.

TRAFFIC AND TRANSPORTATION

TRANS-3

The Applicant proposes that the project owner will submit transporters' names and hazardous material transporter license numbers, rather than submit copies of all hazardous substances transport permits/licenses, because the companies receive the licenses rather than the project owner. The Applicant notes that hazardous materials transport licenses and permits are issued by the state and federal government but not by the State Department of Transportation.

Staff disagrees with this proposed change. Past projects have been certified with a condition similar to the proposed **TRANS-3** requiring the submittal of hazardous materials permits and licenses by the project owners, even though the contracted transport companies received the licenses. This requirement allows for a higher level of compliance review and has not proved burdensome. Enforcement of California Vehicle Code and the Streets and Highways Code sections regarding the transportation and handling of hazardous materials is under the jurisdiction of the California Highway Patrol. However, to address the Applicant's concerns regarding the agencies responsible for hazardous materials transport license/permit issuance, Staff's proposed Condition of Certification **TRANS-3** is hereby revised to read:

TRANS-3: The project owner shall ensure that permits and/or licenses are secured from the appropriate federal and State agencies ~~California Highway Patrol and Caltrans~~ for the transport of hazardous materials.

Verification: The project owner shall include in its Monthly Compliance Reports, copies of all permits/licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances. The project owner shall maintain copies of these permits at the project site for inspection by the Compliance Project Manager (CPM).

TRANS-7

The Applicant proposes eliminating **TRANS-7** as unnecessary because all local roadways are operating at Level of Service (LOS) A, and no significant impact to traffic congestion was identified. However, staff notes that portions of State Route 99 and Interstate 5 would change from LOS C to LOS D. Caltrans guidelines covering these highway areas is a minimum LOS C. Therefore staff disagrees with the Applicant's proposal to eliminate **TRANS-7**.

TRANSMISSION LINE SAFETY AND NUISANCE

TLSN-3

Staff agrees with applicant's proposed changes. Staff's proposed Condition of Certification TLSN-3 is hereby revised to read:

TLSN-3 The project owner shall engage a qualified consultant or a qualified Applicant's representative to measure the strengths of the line electric and magnetic fields from the SJVEC and existing 230 kV lines and the re-routed Helm-Kerman lines before and after they are energized, with the project running at near maximum generating capacity. Measurements should be made at representative points identified as Points A,B,C, and D within and along the edges of the rights-of-way for which field strength estimates were provided.

Verification: The project owner shall file copies of the pre-and post-energization measurements with the CPM within 60 days after completion of the measurements.

WASTE MANAGEMENT

WASTE-6

Staff agrees with applicant's proposed changes. Staff's proposed Condition of Certification Waste 6 is hereby revised to read:

WASTE-6 All workers involved in site preparation shall be thoroughly trained and prepared to encounter soils containing hazardous wastes. Training shall include, as appropriate for the work to be performed, Hazardous Waste Operations (8 CCR 5192), Hazard Communication (8 CCR 5194), and special precautions to take when working in environments where exposure to inorganic arsenic is encountered as described in 8 CCR 5214 with the exception of subsection (n). ~~During site preparation, additional dust suppression methods shall be implemented to prevent generation of dust. The project owner shall identify these measures and frequency of~~

~~implementation in a plan to be submitted to DTSC for review and to the CEC CPM for review and approval. After site preparation, all areas of the site shall either be 1) capped either by buildings, asphalt, gravel or concrete concrete, 2) landscaped, or 3) returned to agricultural use. As an alternative to worker training and capping the site, the applicant can demonstrate through a more rigorous sampling and analysis program, that the levels of arsenic and chlorinated pesticides are low enough so as to present an insignificant risk to workers and the off-site public.~~

Verification: Not later than 30 days prior to commencement of site preparation, the CPM shall be notified regarding whether the alternative soil testing will be implemented in lieu of mitigation~~the dust suppression plan shall be submitted to the CPM for review and approval. A soil sampling and analysis plan shall be submitted to the CPM for review and approval prior to initiation of the soil sampling and analysis program.~~

WASTE-7

Though not requested by the Applicant, Staff proposes the following changes to clarify the condition:

WASTE-7 The project owner shall initially test the salt cake product from the crystallizer for the presence of hazardous levels of metals. If levels are below ten times the Soluble Threshold Level Concentration as listed in Title 22, California Code of Regulations, section 66261.24, then future testing is not required unless there is a substantial change in the wastewater treatment process. If not classified as a hazardous waste, the project owner shall manage the salt cake product appropriately as a designated waste.

Verification: As soon as practicable but no later than 30 days after the initial generation of salt cake, the project owner shall notify the CPM of the test results and the planned disposal method.

WASTE-8

The Applicant has requested a minor change to this condition. However, staff no longer feels this condition is necessary. Therefore, Staff recommends deletion of this condition.

~~**WASTE-8** The project owner shall test representative samples of the effluent from the brine concentrator for the presence of hazardous levels of metals. If test results indicate that the effluent is classified as hazardous, then the project owner shall apply to DTSC for a recycling exemption for hazardous waste treatment as provided for in Health and Safety Code section 25132.2(c)(2).~~

Verification: ~~Within 60 days of beginning commercial operation, the project owner shall notify the CPM of the test results for the brine concentrator effluent. If applicable, the project owner shall include a copy of the DTSC application, and shall notify the CPM upon receipt of the exemption from DTSC.~~